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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,008

03/26/2004

Gene Kelly Norris

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21898 7590 02/16/2007
ROHM AND HAAS COMPANY
PATENT DEPARTMENT
100 INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19106-2399

EXAMINER

LISTVOYB, GREGORY

ART UNIT

PAPER NUMBER

1711

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/811,008

Applicant(s)

NORRIS ET AL.

Examiner

Gregory Listvoyb

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/6/2008 8/16/2009 *ll*
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Response to Arguments

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanejko (US patent 6395687) herein Hanejko in view of Kublak et al (US Patent 3597378), herein Kublak.

Hanejko teaches a an iron-based powder composition comprising reaction product of:

linear C8-C10 linear dicarboxylic acid (Sebacic Acid), C12-C20 monocarboxylic acid (Stearic Acid) and C2-C6 alkylene diamines (Ethylene Diamine) (Column 3, line 45).

Hanejko does not disclose 30-45% of dicarboxylic acid, 40-60% of monocarboxylic acid and 12-20% of diamine. It leads to low molecular weight of wax product, having melting point of 150C. In order to increase melting point of the wax, it is necessary to increase molecular weight of wax, combining dicarboxylic acid and diamine in stoichiometric ratio.

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Kublak teaches a wax, comprising a reaction product of the following components:

- A. linear dicarboxylic acid (preferably, Sebacic (C6),
- B. monocarboxylic acid (preferably, Stearic (C18))
- C. diamines (preferably, Ethylenediamine) (Method A, Column 2)

Molar ratio of B to A is within the range of 1: 1 to 6:1 and the number of acidic groups in A and B equal to number of amino groups in C.

Therefore, a ratio of total number of equivalents of carboxylic acid to diamine is equal to 1.00

In Table 1, Example 9, Kublak disclose a wax with melting point of 230-240C, which is a product of reaction of 30% Sebacic acid, 56% of Stearic acid and 14% of Ethylenediamine.

In the case there Sebacic and Stearic acid added in the ratio one to one , the amount moles of Diamine would be equal to 1.5. In weight percent The amount of the above components, expressed in weight percent will be 35 % of Sebacic acid, 49% Stearic acid and 16% of Ethylene Diamine.

Kublak teaches that melting point range of the above waxes is 300-600F (150-315C), which matches the corresponding values in the Specification of the Application, confirming similarity of Kublak's wax compositions and ones in the Application.

Kublak discloses a wax comprising saturated monocarboxylic acid, dicarboxylic acid and diamines (see discussion above).

Kublak teaches that Ethylene diamine is added to Sebacic acid (while stirring) with following addition of Stearic acid (Method A, Column 2).

Kublak fails to teach sub-surface addition of diamines. However, since the finished products of the Reference and the Application are produced from the same reactants and substantially identical, MPEP 2113 (Product-by-Process Claims) is applicable.

The Kublak's and the Applicant's waxes, which produced from the same diamines, diacid and monoacid, have Molecular Weight, controlled by Melting Point. Since the ranges of Melting Points in both cases overlap, the products are identical.

In order to increase melting point of wax in metal powder composition it would be obvious to use Kublak's wax in Hanejko's composition.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory Listvoyb whose telephone number is (571) 272-6105. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Listvoyb
Examiner
Art Unit 1711

A handwritten signature in black ink, appearing to read "Irina Zemel", written in a cursive style.

IRINA ZEMEL
PRIMARY EXAMINER